



HOME OWNER'S GUIDE TO WELL CONSTRUCTION

**Publication No. S&WR 96-90
Revised May 1999**

The Department of Ecology is an Equal Opportunity and Affirmative Action employer and shall not discriminate on the basis of race, creed, color, national origin, sex, marital status, sexual orientation, age, religion or disability as defined by applicable state and/or federal regulations or statutes.

If you have special accommodation needs, please contact the ADA Coordinator at (360) 407-6607. The Department of Ecology's telecommunications device for the deaf (TDD) number is (360) 407-6006.

Introduction

This handbook was prepared to provide you with helpful information in planning the construction of your well. State law requires that all wells meet certain minimum standards for construction. These standards are outlined in the Department of Ecology's publication, Minimum Standards for Construction and Maintenance of Wells. You and your well driller share the responsibility to ensure that the wells on your property are constructed to these standards.

Please read through this handbook thoroughly. If you have questions about the information presented, please contact the Department of Ecology's well drilling coordinator for your area. The phone numbers are listed on the back page of this handbook for your convenience.

PLAN AHEAD

You do not need a water right if you will use less than 5,000 gallons per day for domestic or industrial supplies and will irrigate less than half an acre of lawn or non-commercial garden. If you will be using more than 5,000 gallons per day or want to irrigate a larger area, contact the Department of Ecology's Water Resources Program Office for your area to obtain information on applying for a water right (the phone numbers are located on the back page).

Applications for permits may be obtained at the Regional Office of the Department of Ecology in your area. (Addresses/phone numbers on back page)

Ordinarily, water for a single domestic dwelling, to include some stock and irrigation of one-half acre of non-commercial garden, would not exceed the 5,000 gallon a day limitation.

Research the area in which the well is to be constructed. Well log data can be obtained from your neighbors, local well contractors, county health offices, and records in the Department of Ecology's Regional Office covering your area. Such valuable data as size, depth, capacity, and location of these wells are often available. One must realize, however, that there is no guarantee that the well contractor will find water based on this data. The complexities of the geology in a given area may be such that groundwater may not be available on your property even though a neighbor's well may be close to your proposed well site.

LOCATION OF THE WELL

Always locate the well on high or well drained ground and observe the prescribed distances from septic tanks, privies, stockyards, and other sources of contamination (at least 100 feet). Contact your county health offices and/or county planning departments to check for any additional county regulations or ordinances. Public water supplies (serving two or more homes) must have prior approval by local or state health officials (refer to Washington Administrative Code (WAC) 173-160-171, available at your public library).

SELECTION OF A WATER WELL CONTRACTOR

Only a duly licensed and bonded well contractor is permitted to construct wells in the state of Washington. The license must be issued by the Department of Ecology. A general contractor's registration with the Department of Labor and Industries is not sufficient authority to contract for the construction of wells.

To verify Washington State well driller licenses please contact: Department of Ecology, Well Drilling Coordinator at (360) 407-6648 or Well Driller Licensing/Testing at (360) 407-6650 or contact the appropriate Department of Ecology Regional Office for your county.
(Addresses/phone numbers on back page)

Step 1. Consult the following sources for the names of local well drillers:

Classified section of telephone directory
Well equipment suppliers
Well owners in your neighborhood
Department of Ecology, Headquarters or Regional Offices for verification of Washington State Well Drilling licenses (Addresses/phone numbers on back page)

Step 2. Seek information on well contractors as follows:

- a. Reputation
- b. Reliability
- c. Competence
- d. Experience
- e. Current license
 1. Up-to-date well drilling license
 2. Licensed and bonded through the Department of Labor and Industries
- f. To verify enforcement actions (if any) issued against specific well drillers, please contact the Regional Office of the Department of Ecology in your area.
(Addresses/phone numbers on back page)

Step 3. Consult with well contractors on the following:

- a. A written contract for mutual protection
- b. Insurance protection
- c. Construction of well to include:
 1. Size of hole
 2. Casing diameters including reduction
 3. Casing quality and type
 4. Screening and perforation requirements, if any (also called well development)
 5. Sealing requirements under state codes (WAC 173-160-075).
 6. Water quality and water production tests
 7. Filing a certified copy of well log for the owner: water well logs are filed at the Department of Ecology's Regional Offices (addresses/phone numbers on back page.) Well logs are filed by County, Section, Township

and Range. Please have this information before contacting the appropriate office. Well Drillers are required to file well logs with the Department of Ecology **30 days after completion of the well.**

8. A Department of Ecology well identification tag: well drillers are required to attach a well identification tag and record the well identification number on the well log. The tag should be attached in a reasonably permanent fashion.

9. Guarantee of materials and workmanship

10. Estimated depth of well to be cased¹*

11. Estimated total depth of well*

Step 4. Require that the prospective well contractor itemize an estimate of costs to include the following:

- a. Cost per foot of drilling
- b. Cost per foot of casing
- c. Cost of sealing materials and labor involved
- d. Cost of other materials (drive shoe, screen, perforated casing, etc.)
- e. Cost of well development (including bailer test when appropriate)
- f. Cost of pump test on wells drilled under water right permit (required by regulations)
- g. Cost of pump installation, riser pipe, control box, wiring and wellcap, if appropriate

Step 5. Pay fee

A fee is charged for construction of water wells. The fee is to be paid by the property owner to the Department of Ecology Headquarter's Fiscal Office at P.O. Box 5128, Lacey, WA 98509-5128 when the notification form (see below) is sent in.

The fee for construction of a new water well with a minimum top casing diameter of less than twelve (12) inches is \$100.

The fee for construction of a new water well with a minimum top casing of twelve (12) inches or **greater** is \$200. These fees are used by Ecology to support inspections of wells.

IMPORTANT INFORMATION: PROPERTY OWNER RESPONSIBILITIES

The property owner is to submit, along with the fee mentioned above, a notification form to the Department of Ecology at least **72 hours prior to well construction**. Notification forms are available through Ecology's Regional Offices, licensed well drillers, and county building departments. The forms can be filled out by the property owner or the driller. It is also the responsibility of the property owner to decommission any well that is abandoned, unusable, not intended for future use, or that poses an environmental, safety, or public health hazard. Contact Ecology's Regional Office for your area if you have questions.

PUMP INSTALLATION

When selecting pump and water system equipment be sure to:

1. Select a proper pump and water system adaptable to your present and future needs.
2. Properly house and protect your pump and equipment.
3. Arrange to have your pump equipment serviced periodically.

NOTE: If your pump installer disturbs the surface seal when installing the pump, it is their responsibility to re-install/fix this surface seal. **This is very important** as contaminants can enter your well if the seal is broken.

Delegation

As of 1992, counties or local health districts may have received authority to inspect well seals and decommissioning aspects of the drilling regulations. **Prior to having your well constructed, check with your county environmental health department to get any additional information on local well construction ordinances.**

Do's and don'ts

1. Do obtain a permit prior to construction if you intend to withdraw more than 5,000 gallons a day or irrigate more than 1/2 acre of non-commercial lawn or garden from a well (Estimate your needs.)
2. Do consider your neighbors' present well location, septic system location, and other potential contaminants in locating your own.
3. Do make certain that you and the water well contractor fully understand the terms of your written contract.
4. Do locate your well, giving primary consideration to sanitation requirements.
5. Do have your well water analyzed to determine bacterial and mineral content.
6. Do make sure that the driller files a copy of the well log with the appropriate office of the Department of Ecology.
7. Do obtain a certified copy of the well log on your completed well, including a bill of materials and record of work performed.
8. Do make sure your driller seals the well.
9. Do decommission any well that is abandoned, unusable, not intended for future use, or that poses an environmental, safety, or public health hazard.
10. Don't hire an **unlicensed** driller.

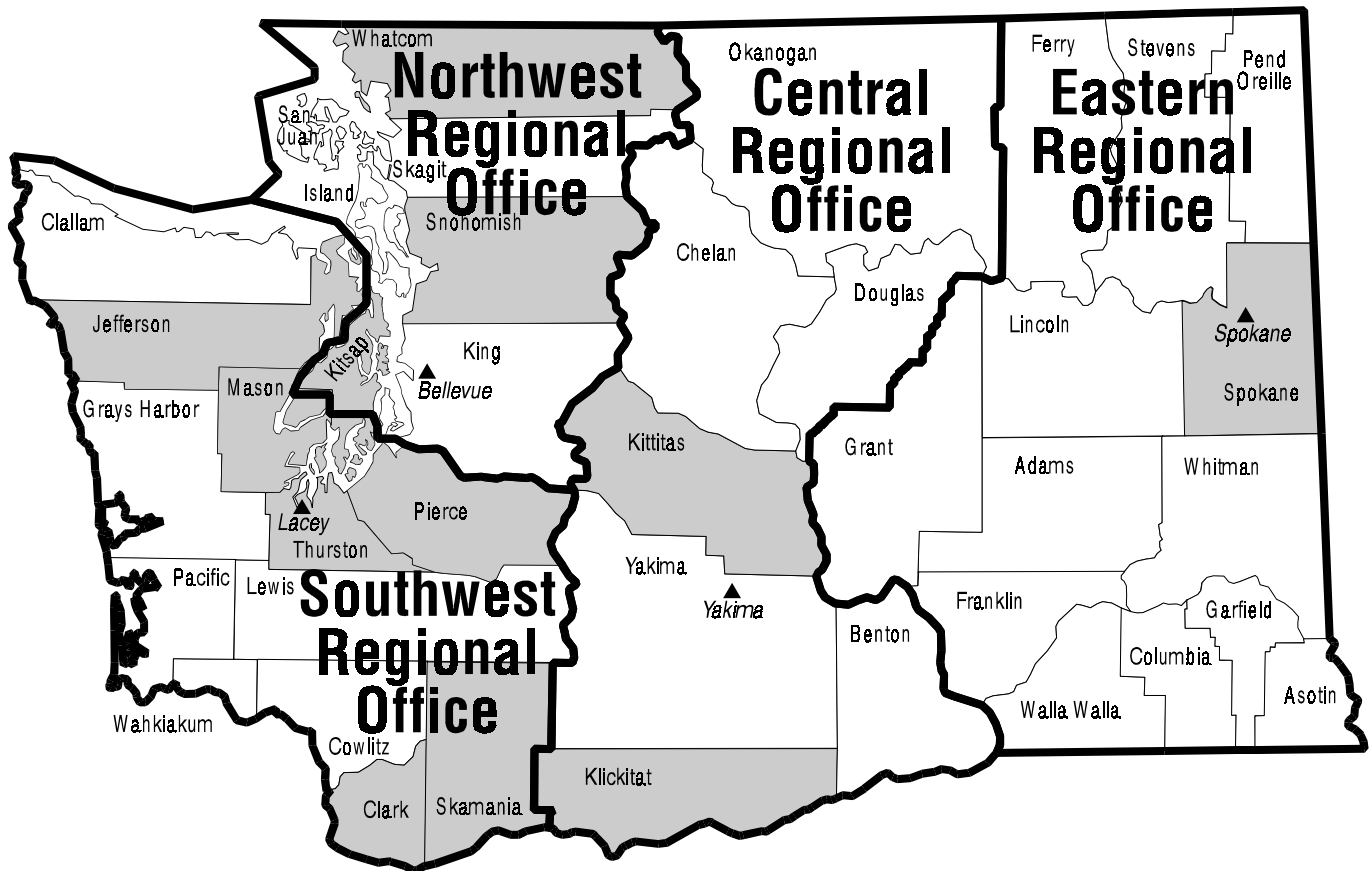
11. Don't ask a driller to construct a well that will not meet state standards. (You would be subject to probable future costs to remedy the deficiencies that result from improperly constructed wells, and the driller's license would be in jeopardy.)
12. Don't purchase your pump prior to well construction.
13. Don't store pesticides, fuels, or other chemicals in your well house or near your well.
14. **Do make sure your driller attaches a Department of Ecology well identification tag to your well.**
15. Do remember that conservation means using what you have more efficiently. Conservation can be a great tool for the individual well owner to use to save money and benefit the environment.

Wellhead protection

If your well will serve 15 or more connections or 25 people, contact the Washington Department of Health's Wellhead Protection Program at (360) 586-9041 for information on how to protect your wellhead from contamination.

If your well serves 2 to 15 homes, contact your county health department for information regarding citing standards associated with the size of the well.

Below is a map of the state of Washington, with the outlines of the four Ecology Regional Offices. Prior to drilling your well, contact the appropriate **Ecology** staff listed below, as well as the **county** environmental health department for additional regulations. The counties that are shaded on the map below, have been authorized to administer and enforce the well drilling standards that pertain to sealing, decommissioning, and well tagging.



Department of Ecology Addresses

Water Resources Program

Headquarters Office

P.O. Box 47600

Olympia, Washington 98504-7600

(360) 407-6000

(TDD) (360) 407-6006

Well Construction

(360) 407-6648

Well Driller Licensing/Testing

(360) 407-6650

Well Identification

(360) 407-6648

Northwest Regional Office

3190 - 160th Avenue SE

Bellevue, Washington 98008-5452

(425) 649-7000

(TDD) (425) 649-4259

Well Drilling Coordinator

(425) 649-7044

Water Rights Coordinator

(425) 649-7038

Southwest Regional Office

510 Desmond Drive
Olympia, Washington 98504-7775
P.O. Box 47600
Olympia, Washington 98504-7600

(360) 407-6300
(TDD) (360) 407-6306

Well Drilling Coordinator
Water Rights Coordinator

(360) 407-0281
(360) 407-0240

Central Regional Office

15 West Yakima Avenue, Suite 200
Yakima, Washington 98902-3401

(509) 575-2490
(TDD) (509) 454-7673

Well Drilling Coordinator
Water Rights Coordinator

(509) 575-2639
same as above

Eastern Regional Office

N. 4601 Monroe, Suite 100
Spokane, Washington 99205-1295

(509) 456-2926
(TDD) (509) 458-2055

Well Drilling Coordinator
Main Switchboard, Water Rights Questions

(509) 456-6348
(509) 456-2926

County Delegation Contacts:

Clark	Joe Hunt	(360) 397-8428
Whatcom	Sarah Brozusky	(360) 676-6724
San Juan	Mark Tompkins	(360) 378-4474
Tacoma-Pierce	Rich Dickerson	(253) 798-2885
Snohomish	Kevin Plemel	(425) 339-5270
Bremerton-Kitsap	Bill Lum	(360) 337-5246 ext.6251
Thurston	Heather Saunders	(360) 754-2963
Mason	Laura Benefield	(360) 427-9670 ext. 361
Skamania	Martin Auseth	(509) 427-5138
Kittitas	Holly Duncan	(509) 962-7580
Jefferson	Dave Christiansen	(360) 385-9444
Spokane	John Wiley	(509) 324-1475
King	Trudy Rolla	(206) 296-4833
Cowlitz	Larry Frazier	(360) 577-3052
Skagit	Ken Willis	(360) 336-9380